

eye. When the eye was directed forwards there was a glimmer of light, as he described it, "to the left;" but this was lost when the eye was turned outwards. There was not any objective symptom, except inactivity of the pupil. According to the history, a blow was received on the eyeball from a stone many months ago, and in a few minutes sight was lost. So apparently slight was the injury, that the surface of the eye was merely a little bloodshot. There was no after-symptom, not even pain. Mr. Walton determined to use the ophthalmoscope; and having seen some remarkable changes in the eye, brought the man to St. Mary's, on Wednesday last, to show him to his colleagues, or any gentleman who had not seen the ophthalmoscope applied. When the reflection of the mirror was thrown directly on the dilated pupil, the eye was not always at once illuminated, as happens when the interior of the organ has not undergone any structural change, the light falling as it were on a semi-opaque substance, but occasionally it enticed and produced illumination. A movement or two of the eyeball was sufficient to overcome this obstacle, which was apparently by the displacement of some substance. When the light was thus admitted, there was visible on the outer side of the eye a membranous looking body, with red vessels moving in undulations, and which Mr. Walton considered to be detached retina. With a little management of the ophthalmoscope, and altering the position of the eye, the ramification of the artery on the inner portion of the retina was recognizable. This was considered to be a satisfactory demonstration that the eye was destroyed, and that all treatment must necessarily be useless. If the ophthalmoscope only saved patients from useless courses of mercury, blistering, etc., and practitioners from the discredit of exciting false hopes, its utility would be very great. Mr. Holmes Coote has had a room fitted up at St. Bartholomew's, where the eye can be conveniently examined by the ophthalmoscope. He gave a very useful clinical lecture on the 12th instant, explaining the use of the instrument, concluding by narrating the following case: "A woman is at the present time in the hospital under my care, in whose right eye I have made an artificial pupil with advantage, and propose repeating the operation on the opposite organ. Two years ago, she had an attack of syphilitic iritis, which produced the usual effects of adhesion of the margin of the iris to the crystalline lens, and contraction and nearly complete obliteration of the pupil. By dilating the pupil in one direction, where the adhesion was less firm, by means of atropine and using the ophthalmoscope, I ascertained that the choroid was tolerably healthy, and I therefore recommended the woman confidently to submit to an operation, which would allow the free passage of light into the globe. This has been done, and she can now make out large print with a glass. My friend Mr. Wordsworth, of the Royal Ophthalmic Hospital, mentioned to me a case of blindness, ensuing after a blow, due entirely to an extravasation of a clot of blood in the vitreous humour, in the direct axis of vision. It was quite invisible in the unassisted examination, the eye of the patient looking natural. Now, many of you will enter the public service, where you will have to decide on cases such as these. A man, blind of one eye, especially the right, is hardly fit to be a soldier; and yet you might be inclined to accuse the man of malingering, in such a case as the preceding, without the assistance derived from the ophthalmoscope. A woman was recently dismissed from a large hospital as incurably amaurotic. It was discovered in another place, by means of the ophthalmoscope, that a melanotic tumour was growing from the back of the eye, and the organ was extirpated accordingly." Mr. Coote uses the instrument of Coccinus.—*Med. Times and Gaz.*, Jan. 24, 1857.

54. *Inutility of Depletion in the Cure of Syphilitic Iritis.*—Mr. JOHN HAMILTON, Surgeon to the Richmond Hospital, in a recent clinical lecture (*Dublin Hospital Gazette*, Dec. 8, 1856), states that he is sure that depletion is unnecessary for the cure of syphilitic iritis. "I have," he says, "for many years past, treated a large number of cases without taking away a drop of blood, and cured them as rapidly and effectually as could be wished. The treatment has consisted in the administration of mercury to decided salivation, and the application of the extract of belladonna round the orbit." He reports two

instances of the success of this mode of treatment, in cases offering the acute form of the disease.

"I was originally led," he states, "to reject depletion, when patients, labouring under syphilitic iritis, presented themselves in the same wretched, depressed condition as this man and woman, and with such a bloodless aspect, that they were obviously no subjects for taking from them what they so evidently wanted—a proper supply of healthy vivifying fluid. With the old prejudices in favour of depletion in inflammatory diseases, it required some courage to resist applying leeches or cupping-glasses, when the eye was so intensely inflamed; and I watched the daily progress of the diseased action with no little anxiety. Observing this to be so favourable, that directly the mercury affected the mouth and the system, the inflammation subsided, the iris resumed its bright, healthy aspect, and unclogged of the lymph which, deposited in its structure had stopped its motions, the pupil expanded to the action of belladonna, I applied the same treatment to other cases, and finally rejected depletion altogether in syphilitic iritis. The line of treatment is sufficiently detailed in these cases to render any further remarks, as to the form or mode of administering mercury, unnecessary. Two grains of calomel, and one-fourth, or one eighth, of a grain of opium, three times a day, till full salivation, in subacute cases; and in the acute form of the disease, or in that which suddenly becomes acute, the same quantity every third hour. Where there are other symptoms, eruptions, etc., the mercurial action should be kept up for eight or ten weeks, till the poison is fully worked out of the system.

"It will be frequently observed that, during the time the patient is taking mercury, before salivation is induced, the disease advances, the iris becomes more dull and thicker, and the pupil more hazy; in short, that the unchecked inflammation is exhibiting its ravages on the structures of the eye. It might be considered a time for depletion, but it is not; though the application of a cupping-glass to the temple, or a full bleeding from the arm, will pale the red and inflamed eye for a time, by unloading the vessels, and the patient see, perhaps, more clearly, the amendment is short-lived, the specific diseased action is there still, and soon resumes its work of destruction, which is only effectually checked by mercury. Directly the mouth is affected, the improvement begins, and persists.

"Relapses in syphilitic iritis are, it is well known, common, even after the iritis is apparently quite well. Sometimes only a little pale pink zone round the cornea marks a tendency to return of the disease, with some contraction of the pupil; at others, the relapse consists in a full return of the disease as bad as ever; contracted, irregular pupil, dull, discoloured iris, loss of sight, and intense vascularity of both conjunctiva and sclerotica. The patient is, probably, under the influence of mercury at the time; he must be kept so, and the quantity rather increased, to produce a more decided action on the gums.

"Now, with respect to the other great agent in the treatment of syphilitic iritis—belladonna. It may be used either in the ordinary way of a portion of the extract moistened, and rubbed round the edge of the orbit, or a drop of the solution of atropine, according to the strength of the *Pharmacopœia*; that is, two grains to the drachm, may be dropped into the eye. In the latter way, the pupil begins to dilate a minute or so, after the drop is in the eye, and remains dilated from twenty to thirty hours, or even longer, afterwards. It is a simple and clean way of using the remedy; the only objection is, that it smarts a good deal. If the extract is used, it should be smeared over the orbit a half an hour before the pain comes on, and it will be found materially to lessen, or entirely prevent the occurrence of the pain. Authors appear not to have attended to this very valuable property of belladonna, their attention having been absorbed by its action on the pupil. When we consider the *rational* effects of belladonna in assuaging the supra-orbital pain, or in dilating the pupils, we may, I think, attribute them fairly to its influence on the supra-maxillary branch of the fifth nerve. Anatomists are divided as to the real structure of the iris; some believing the circular fibres at the inner ring round the pupil to be muscular, but the radiated fibres not so, but of a vascular

structure; others, among whom there is no higher authority than Dr. Jacob, consider both circular and radiated fibres to be muscular.

The action of belladonna favours the former opinion. By paralyzing the ciliary nerves through the supra and infra-orbital branches of the fifth, the proper sensibility of the iris is destroyed, and the circular or sphincter muscle ceases to act or resist the dilating force of the radiated elastic fibres, which act mechanically, and dilate the pupil. If both fibres were muscular, as they both receive their sensitive and motor power from the ciliary nerves of the lenticular ganglion, formed by branches from the third and fifth, and sympathetic, they should both be paralyzed by the belladonna, and the pupil should be neither dilated nor contracted. We see the contrary to this in the extremities, where the flexor and extensor muscles, receiving their nerves from different sources, the paralysis of the extensors may take place alone, and the unaffected flexors act separately, and keep the limb permanently flexed. Did the circular and radiated fibres of the iris receive their supply of motor nerves from different sources, the paralysis of one might lead to the unresisted action of the other, as in the instance cited above, or the not less striking one of the external rectus muscle of the eye, which alone receives its supply from the sixth nerve, and is paralyzed alone, while its antagonist muscle, the internal rectus, getting its motor supply from another source, acts vigorously, and draws the eye inwards to a squint. For these reasons, therefore, I think that the action of belladonna in dilating the pupil, is in favour of the circular fibres of the iris being muscular, the radiated fibres not so, but of elastic tissue. However this may be, this property of belladonna of dilating the pupil, is most valuable. In the beginning of iritis, as I have already said, when the structure of the iris is clogged up with lymph, this action is not apparent; its utility, then, would mainly appear to be to paralyze the circular fibres, and thus prevent contraction of the pupil. But it is only as the lymph is absorbed by the mercurial action, and the iris regains its natural structure and properties, that the pupil dilates by the belladonna, and it is then only that the nature and extent of the adhesions are made manifest, either at one side, or at several different places; and as, at these parts, the edge of the iris is tied down, while it elsewhere dilates, various forms of irregularity of the pupil are observed. Where there have been many points of adhesion at pretty regular distances, a festooned appearance has been given to the edge of the iris. By the aid of a glass, in one case, about twenty small strings of lymph were seen joining the iris to the capsule of the lens. In others, the inner edge of the iris presented a fringed appearance. The adhesions, in some cases, remain permanently, but in the majority they entirely disappear. By the well regulated administration of mercury, therefore, proportioned to the progress of the case, and the local use of belladonna, you will, in the majority of cases, cure your patient of syphilitic iritis, without abstracting a drop of blood. One thing I should wish still to impress upon you, viz., that you should be very slow in giving up apparently the most hopeless case of syphilitic iritis, such cases as we meet with chiefly in hospital practice, where a constitution, originally bad, has been further deteriorated and irritated by drink and bad diet, with a long-continued previous neglect of all remedial measures. When the disease is in its most advanced stage, tubercles on the iris, pus in the anterior chamber, the pupil contracted, shaggy, and opaque from lymph, even in such cases, by a prolonged use of mercury and belladonna, though you may fail in perfectly restoring the organ, you will often succeed in effecting a most useful degree of vision.

55. *Entropium, or Inversion of the Eyelid; its Pathology and Treatment.*—The *British Medical Journal* (Jan. 3, 1857) contains an interesting report, by Dr. MAURICE DAVIS, of a case of entropium recently operated upon by Mr. Haynes Walton, at the Central London Ophthalmic Hospital, with some just preliminary remarks.

"It has been remarked that ophthalmic surgery owes no advancement to the mere oculist. Now, although our knowledge of ancient medical literature is too defective to be applied, we can give proof of the correctness of the statement in modern times in Great Britain. All the treatises, and all the mono-